Patents: a broken system

BY MARK PEPLOW

They're meant to encourage innovation, but nowadays the biggest winners are not inventors but lawyers. Costly battles among hi-tech giants are sparking fresh calls for reform, but there are no quick fixes.

Patents are supposed to form the bedrock of innovation. By giving inventors and companies the exclusive right to exploit their creations – usually for up to 20 years – they provide a huge incentive to invest in research and development.

That's the conventional wisdom. But concerns have grown in recent years that some patent systems are deeply flawed and may actually be stifling innovation. "A badly run patent system can really hold up innovation," says business economist Dietmar Harhoff of Ludwig Maximilians University in Munich.

The problem is particularly acute in the United States, where companies spend billions of dollars to build up portfolios of patents and billions more to defend them in court – or to use them to attack competitors.

The situation arises because the U.S. Patent and Trademark Office is less rigorous in assessing the novelty of inventions and tends to grant patents for very incremental discoveries, argues Bruno van Pottelsberghe, dean of the Solvay Brussels School of Economics and Management and former chief economist at the European Patent Office. A patent maintained for the full 20 years of protection in the U.S. is also relatively cheap – costing perhaps several tens of thousands of dollars – compared with one in Europe, which might cost 10 times as much, says Harhoff.

THE BURDEN ON EXAMINERS

This spurs companies in the U.S. to stay ahead of rivals by filing as many patents as possible – often on minor developments – creating an arms race that ultimately devalues patents, says van Pottelsberghe. This puts a huge burden on patent examiners, who have less power than their European counterparts to reject applications.

The sclerotic U.S. system is particularly bad at dealing with software innovations. Examiners have difficulty assessing the novelty of an innovation because source codes are often not made public. And, in contrast with Europe, pending patents in the U.S. can remain hidden from public view for years, allowing companies to amass secret portfolios that overlap with successful products on the market. Once these patents are granted, litigation almost inevitably ensues.

A notably acrimonious case involved patent holding company NTP, which won more than $600 million from Blackberry-maker Research in Motion in 2006. Some commentators criticized NTP as a "patent troll" – a business whose primary goal is to exploit patents for purely litigious purposes.

The case highlighted a more general problem with U.S. software patents: they tend to be broad,

abstract and claim ownership of a function – such as wireless e-mail – rather than the precise way it is achieved. The ongoing legal battle between Apple and Samsung, for example, involves patents on ideas like dragging documents on a touchscreen, or the very concept of a device that is both a phone and a camera. Juries in these cases also tend to award excessive damages, ascribing commercial values to patents that are too high "by an order of magnitude," says patent-law expert Brian Love at Santa Clara University in California.

IDEAS FOR REFORM

Love argues that the U.S. patent system should be reformed to lower these damages and to make it more expensive to maintain patents. Valuable patents on profitable products would be worth sustaining, while weak patents would be more likely to expire, preventing them from being bought up cheaply by trolls, he argues.

The America Invents Act of 2011 did offer some hope of change, but during its passage, "all the things that could have meant real reform were stripped away," says Love. One consequence of the bill is that in March 2013 the U.S. will shift from a "first to invent" system – which awards priority to the person who originally had an idea – to the "first to file" system used in most other countries. "It sounds like a big deal," says Love, "but it isn't." Patent disputes already tend to be settled in favor of the first to file, says Love, because it is difficult to prove that someone had a Eureka moment many years ago.

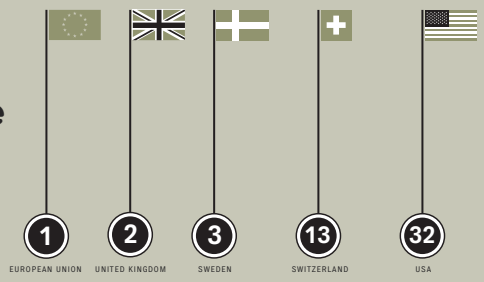
The Act does enable the U.S. patent office to change its fees, however, making patents more expensive for big companies and generating revenue that could potentially be used to improve the rigor of the examination process. And the office is set to allow freshly minted patents to be challenged without needing to go through expensive litigation – an initiative that has proven successful in Europe. "It's a move in the right direction," says Harhoff.

Europe isn't without its own patent headaches. Last year the European Parliament broke decades of deadlock to move forward with a "unitary patent" that would be valid in all signatory nations. Expected to be operational in 2015, it would allow companies to avoid having to patent their innovations many times in each different European country. But unless national patent offices stop granting their own patents, argues van Pottelsberghe, the unitary patent will merely add another layer of patent bureaucracy to an already complex system.

Wrangling over patent systems is not new, Love points out, and it will probably be with us for many years to come. In the 19th-century, patent wars flared up over farm tools and railroads in the U.S., for example. "Every time there's a big breakthrough with a complex technology, you tend to have these patent wars," he says. "It will probably continue until we make major changes to the patent system." ■

Quality ranking of patents office

Based on estimations of transparency, assessments rigor, ease of challenging patents, etc.



BRUNO VAN POTTELSBERGHE AND MATTHIS DE SAINT-GEORGES, UNIVERSITÉ LIBRE DE BRUXELLES, 2011

1,694,000

Number of applications filed at the five largest patent offices (EU, U.S., Japan, Korea, Canada) in 2011 (+10%)

791,773

Number of patents granted by the five largest patent offices, 2011 (+12%)

2.6 BILLION

Expenditure of the U.S. patent office

2.6 BILLION

Apple's expenditures on buying patents from Nortel, 2011

29 BILLION

Legal fees generated by patent trolls

Patent troll:

A company whose revenues come primarily from filing aggressive patent infringement lawsuits.